

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

Five Year Mean Sea-surface Salinity in the Northern Gulf of Mexico for 2005 through 2009

1.2. Summary description of the data:

These images were created by combining the mean sea-surface salinity values to produce seasonal representations for winter, spring, summer and fall. Winter includes the months of January, February and March; spring includes the months of April, May and June; summer includes the months of July, August and September; fall includes the months of October, November and December. Sea-surface salinity values were originally obtained from the Naval Research Laboratory at the Stennis Space Center (NRL/SSC). NRL/SSC processed MODIS-Aqua satellite imagery covering the Gulf of Mexico, for a 5-year time period from January 2005 through December 2009. The Gulf of Mexico was divided into three regions, western, central and eastern. For purposes of this image, the three regions were joined in ArcMAP 10. Sea-surface salinity was estimated from the ocean color imagery, based on an empirical relationship between colored dissolved organic matter (CDOM) absorption and salinity. Researchers at NRL have exploited this relationship to empirically estimate salinity from ocean color satellite imagery, since the absorption slope difference between 412 nm and 443 nm can be used as a proxy to estimate the CDOM absorption coefficient: $\text{Salinity} = 36.208 - 46.488x + 27.683x^2 - 8.338x^3 + 0.965x^4$. In the above equation, x = difference between the absorption coefficients at 412 and 443 nm ($a_{412} - a_{443}$). The algorithm was developed using in situ data from a wide variety of locations and has been validated with independent ship and mooring data (Ladner et al. 2006; 2008). Currently the algorithm has an accuracy of about 1 PSU and is valid in coastal waters where salinity is strongly impacted by freshwater discharge (out to approximately mid-shelf). The algorithm is based on the difference in total absorption at 412 and 443 nm. NRL produced salinity images from the MODIS satellite ocean color data at both 250 m and 1 km spatial resolution in the Gulf of Mexico using this relationship. The salinity product derived from the ocean color imagery is still experimental and requires further validation. It is expected that different mixing regimes will affect the conservative nature of the CDOM/salinity proxy relationship, resulting in deviations from the above empirical relationship. These values

were then reclassified into salinity ranges in accordance with the Coastal and Marine Ecological Classification Standard (CMECS). There are five CMECS categories presented: oligohaline (0 - < 5, shown in red), mesohaline (5 - < 18, shown in green), lower polyhaline (18 - < 25, shown in purple), upper polyhaline (25 - < 30, shown in yellow), and euhaline (> 30, shown in blue).

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2005-01 to 2009-12

1.5. Actual or planned geographic coverage of the data:

W: -98.1, E: -81.1, N: 30.9, S: 25.2

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)

Map (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:

coastal.info@noaa.gov

2.5. Phone number:

(843) 740-1202

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of

the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- 2012-01-01 00:00:00 - Sea-surface salinity values assigned in accordance with the Coastal and Marine Ecological Classification Standard.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)

- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
 - 7.1.1. If data are not available or has limitations, has a Waiver been filed?
 - 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/48040>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected

from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

http://service.ncddc.noaa.gov/arcgis/rest/services/DataAtlas/CMECS_Salinity_Fall/MapServer
http://service.ncddc.noaa.gov/arcgis/rest/services/DataAtlas/CMECS_Salinity_Spring/MapServer
http://service.ncddc.noaa.gov/arcgis/rest/services/DataAtlas/CMECS_Salinity_Summer/MapServer
http://service.ncddc.noaa.gov/arcgis/rest/services/DataAtlas/CMECS_Salinity_Winter/MapServer
<http://www.ncddc.noaa.gov/website/DataAtlas/atlas.htm?plate=Salinity%20-%20CMECS>

7.3. Data access methods or services offered:

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage

relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.